

*Arizona Department of Transportation*

**ARIZONA HIGHWAY USER REVENUE FUND**  
**Forecasting Process & Results**  
**FY 2004-2013**



**Financial Management Services**  
**November 2003**

**ARIZONA HIGHWAY USER REVENUE FUND  
OFFICIAL FORECAST UPDATE  
RISK ANALYSIS OF EXPECTED VALUES  
as of November 2003**

**Introduction**

This document presents the Arizona Department of Transportation's (Department) forecast of expected values for the Arizona Highway User Revenue Fund for the period FY 2004-2013.

**Background**

The State of Arizona taxes motor fuels and collects a variety of fees relating to the registration and operation of motor vehicles in the state. These collections include gasoline and use fuel taxes, motor carrier fees, vehicle license taxes, motor vehicle registration fees, and other miscellaneous fees. These revenues are deposited in the Arizona Highway User Revenue Fund (HURF) and are then distributed to the cities, towns and counties of the State and to the State Highway Fund, which is administered by the Department. These taxes and fees represent the primary source of revenues available to the state for highway construction, improvements and other related expenses.

Since 1986, the Department has estimated Highway Revenues for the State using a comprehensive regression-based econometric model. In 1989, the model was updated by Dr. Alberta Charney of the University of Arizona. The model relied on the estimates of certain "independent variables" to predict future tax revenues. The model's revenue forecast was highly dependent on estimates of the independent variables. Any variability between estimated and actual values could lead to variances in the tax forecast. In order to deal with this variability, the Department introduced the Risk Analysis Process (RAP) in 1992. The RAP relies upon probability analysis and the independent evaluation of the model's variables by an expert panel of economists. This results in a series of forecasts with specified probabilities of occurrence, rather than a single or "best guess" estimate.

In 1997, Hickling Lewis Brod Inc. (HLB), working in conjunction with Dr. Dennis Hoffman of Arizona State University, developed a new forecasting model to incorporate certain economic data generated over the past ten years and evaluate the inclusion of independent variables absent from the 1989 model, to enhance the model's forecasting accuracy. HLB also eliminated independent variables that were either not significant to the model or were not readily available.

The new model also took into consideration 1997 legislation (SB 1144 and SB 1398) which eliminated the weight distance tax on motor carriers, increased weight and use fees for use class vehicles, and changed the point of taxation on fuel. In September 2000 and 2003, HLB reviewed the model and updated the equations. The independent variables contained in the updated model include:

- Arizona real income growth per capita
- Arizona population growth
- Arizona wage & salary employment growth

- Arizona fleet fuel efficiency

### **Risk Analysis Panel**

The Risk Analysis Process relies heavily on the judgments of an expert panel of economists to provide information critical to the forecasting process. In September 2003, an expert panel of nine economists representing public, private, and academic sectors submitted their individual estimates of the model's independent variables and comments on the future economic outlook.

The information gathered from the panelists was input into the updated model to produce a series of forecasts with associated probabilities of occurrence. The panelists' inputs are reflected in the attached tables at the back of this report.

### **Model Results**

Based on the panel's inputs, the model produced a mean forecast of \$14,346.3 million for the period FY 2004-2013 with a compound growth rate of 4.8 percent.

The Department's Official Forecast for FY 2004-2013 totals \$14,238.1 million with a compound growth rate of 4.7 percent. The Official Forecast incorporates the 50 percent confidence interval for each year of the forecast. The FY 2004 forecast of \$1,149.9 million was developed independently of the econometric model using time-series techniques, historical and projected growth rates from the model, and recent legislative changes.

<b>FY 2004 Official Forecast (Dollars in Millions)</b>				
<b>Fiscal Year</b>	<b>Mean Forecast</b>	<b>Official Forecast</b>	<b>Confidence Level</b>	
<b>2004</b>	\$1,151.6	\$1,149.9	N/A	
<b>2005</b>	\$1,208.0	\$1,200.5	50%	
<b>2006</b>	\$1,266.2	\$1,256.0	50%	
<b>2007</b>	\$1,326.6	\$1,318.2	50%	
<b>2008</b>	\$1,388.9	\$1,377.5	50%	
<b>2009</b>	\$1,454.6	\$1,440.0	50%	
<b>2010</b>	\$1,523.7	\$1,512.5	50%	
<b>2011</b>	\$1,597.3	\$1,585.2	50%	
<b>2012</b>	\$1,674.4	\$1,659.6	50%	
<b>2013</b>	\$1,755.0	\$1,738.7	50%	
<b>Total</b>	<b>\$14,346.3</b>	<b>\$14,238.1</b>		
<b>Avg. CGR</b>	<b>4.8%</b>	<b>4.7%</b>		

For comparison purposes, the November 2002 Official Forecast and the November 2003 Official Forecast are shown below:

<b>FY 2004 Comparative Forecast</b> <b>(Dollars in Millions)</b>			
<b>Fiscal Year</b>	<b>Nov. 02 Official Forecast</b>	<b>Nov. 03 Official Forecast</b>	<b>Difference</b>
<b>2004</b>	\$1,151.1	\$1,149.9	(\$1.2)
<b>2005</b>	\$1,199.5	\$1,200.5	\$1.0
<b>2006</b>	\$1,249.8	\$1,256.0	\$6.2
<b>2007</b>	\$1,305.0	\$1,318.2	\$13.2
<b>2008</b>	\$1,361.6	\$1,377.5	\$15.9
<b>2009</b>	\$1,421.4	\$1,440.0	\$18.6
<b>2010</b>	\$1,484.5	\$1,512.5	\$28.0
<b>2011</b>	\$1,546.5	\$1,585.2	\$38.7
<b>2012</b>	\$1,615.6	\$1,659.6	\$44.0
<b>2013</b>	<u>\$1,688.0</u>	<u>\$1,738.7</u>	<u>\$50.7</u>
<b>Total</b>	<b>\$14,023.0</b>	<b>\$14,238.1</b>	<b>\$215.1</b>
<b>Avg. CGR</b>	<b>4.3%</b>	<b>4.7%</b>	

### **Summary**

The Department's Official Forecast for FY 2004-2013 totals \$14,238.1 million, an increase of \$215.1 million. This reflects the panel members aggressive view of the Arizona's long term economy outlook. The Risk Analysis Process panel members forecasted higher growth in Arizona real income per capita for FY 2004-2013 compared to their September 2002 inputs. However, for the Arizona wage and salary employment estimate, the panel forecasted lower growth for FY 2004-2007 and similar growth for FY 2007-2013. They also believe the Arizona population will continue to grow at about the same rate for FY 2004-2013.

### **Supplementary Information**

The remaining pages of this report present supplementary information on the detailed results of the Risk Analysis Process, the Department's model and the values of the independent variables forecast by the expert panel. While the Official Forecast period is FY 2004-2013, panel inputs were requested for FY 2004-2008, 2011, 2016, 2021 and 2026. Data displayed for other than the requested years, has been extrapolated.

**HURF OFFICIAL REVENUE FORECAST**  
**With Category Detail and Confidence Interval By Fiscal Year**  
**(Current Dollars in Millions)**

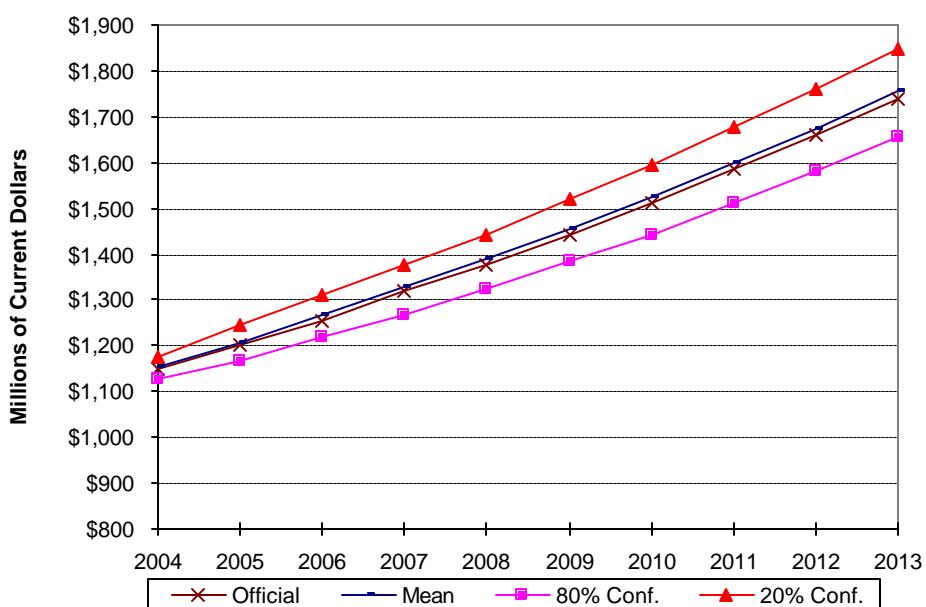
Fiscal Year Percentile	2003 Actual	2004 50%	2005 50%	2006 50%	2007 50%	2008 50%	2009 50%	2010 50%	2011 50%	2012 50%	2013 50%
<b>Gasoline Tax</b>	\$446.9	\$459.9	\$475.1	\$492.8	\$510.6	\$527.0	\$542.7	\$563.2	\$580.8	\$598.9	\$617.8
<b>Use Fuel Tax</b>	166.7	172.0	178.3	183.9	190.8	196.8	203.1	210.9	217.6	224.9	232.1
<b>Motor Carrier Fee</b>	32.9	33.4	34.6	35.6	36.7	37.8	38.8	40.3	41.6	42.9	44.4
<b>Vehicle License Tax</b>	282.0	298.4	319.2	343.8	372.8	401.5	434.3	467.5	505.9	544.7	586.6
<b>Registration</b>	141.3	144.3	148.9	153.4	158.5	163.5	167.9	174.7	180.7	186.8	193.4
<b>Other</b>	41.5	41.9	44.4	46.5	48.8	50.9	53.2	55.9	58.6	61.4	64.4
<b>Total</b>	\$1,111.3	\$1,149.9	\$1,200.5	\$1,256.0	\$1,318.2	\$1,377.5	\$1,440.0	\$1,512.5	\$1,585.2	\$1,659.6	\$1,738.7

**HURF TOTAL TAX REVENUE RISK ANALYSIS RESULTS**  
**(Current Dollars in Millions)**

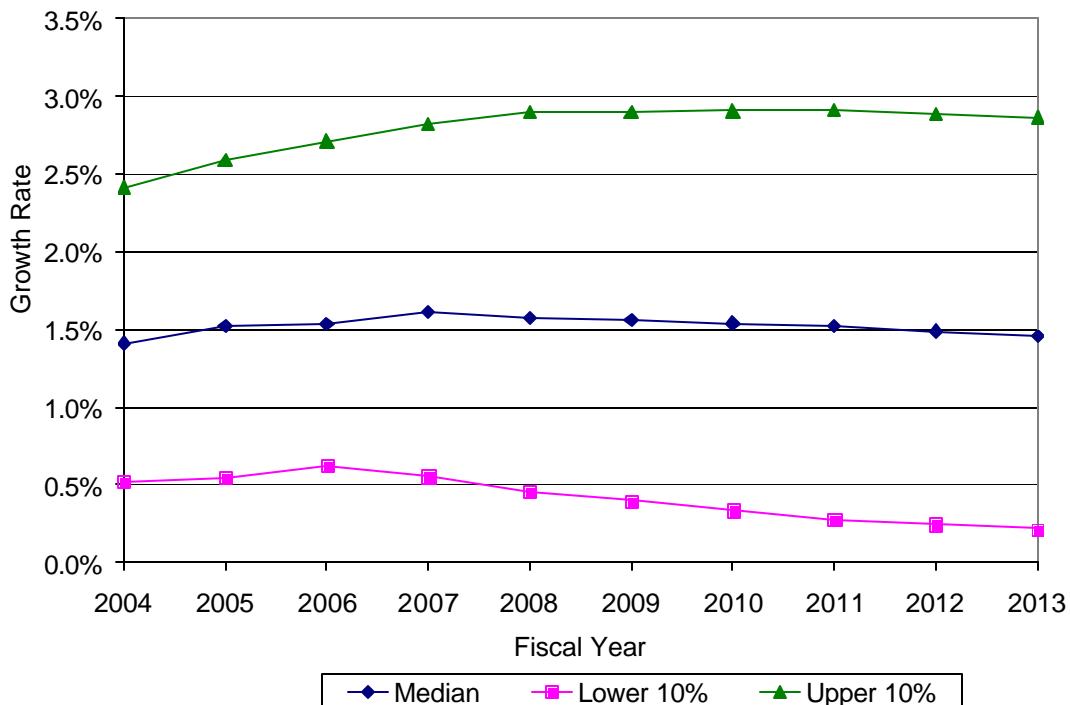
Fiscal Year	Mean	10%	20%	30%	40%	50%	60%	70%	80%	90%
<b>2004</b>	\$1,151.6	\$1,192.6	\$1,175.4	\$1,164.0	\$1,154.6	\$1,146.0	\$1,139.0	\$1,132.4	\$1,125.6	\$1,115.0
<b>2005</b>	1,208.0	1,272.4	1,247.2	1,223.7	1,211.3	1,200.5	1,189.0	1,177.7	1,166.4	1,151.0
<b>2006</b>	1,266.2	1,345.4	1,311.4	1,287.9	1,270.2	1,256.0	1,243.1	1,231.7	1,217.6	1,198.6
<b>2007</b>	1,326.6	1,418.5	1,377.6	1,354.6	1,333.9	1,318.2	1,299.2	1,284.4	1,269.1	1,248.7
<b>2008</b>	1,388.9	1,489.2	1,442.8	1,421.5	1,398.9	1,377.5	1,357.8	1,340.8	1,324.2	1,298.1
<b>2009</b>	1,454.6	1,560.5	1,518.8	1,492.3	1,464.2	1,440.0	1,423.6	1,400.5	1,383.8	1,356.5
<b>2010</b>	1,523.7	1,639.2	1,592.5	1,564.3	1,535.5	1,512.5	1,488.1	1,466.8	1,442.3	1,416.6
<b>2011</b>	1,597.3	1,728.5	1,676.1	1,641.2	1,610.2	1,585.2	1,558.6	1,533.9	1,511.7	1,476.6
<b>2012</b>	1,674.4	1,811.6	1,760.9	1,724.6	1,692.0	1,659.6	1,627.6	1,604.9	1,582.0	1,541.5
<b>2013</b>	1,755.0	1,908.6	1,846.3	1,810.4	1,768.2	1,738.7	1,705.5	1,681.8	1,653.7	1,611.6

## OFFICIAL FORECAST RESULTS (Current Dollars in Millions)

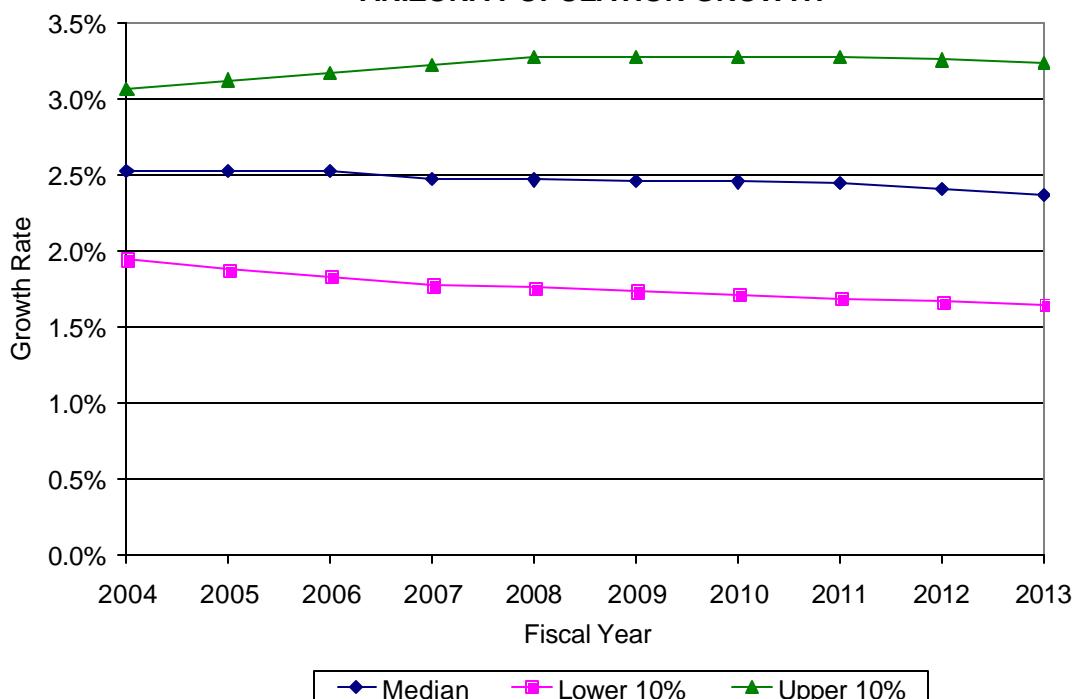
Fiscal Year	Official Forecast	Mean Forecast	80% Conf. Interval	20% Conf. Interval
2004	\$1,149.9	\$1,151.6	\$1,125.6	\$1,175.4
2005	1,200.5	1,208.0	1,166.4	1,247.2
2006	1,256.0	1,266.2	1,217.6	1,311.4
2007	1,318.2	1,326.6	1,269.1	1,377.6
2008	1,377.5	1,388.9	1,324.2	1,442.8
2009	1,440.0	1,454.6	1,383.8	1,518.8
2010	1,512.5	1,523.7	1,442.3	1,592.5
2011	1,585.2	1,597.3	1,511.7	1,676.1
2012	1,659.6	1,674.4	1,582.0	1,760.9
2013	1,738.7	1,755.0	1,653.7	1,846.3
Total	\$14,238.1	\$14,346.3	\$13,676.4	\$14,949.0



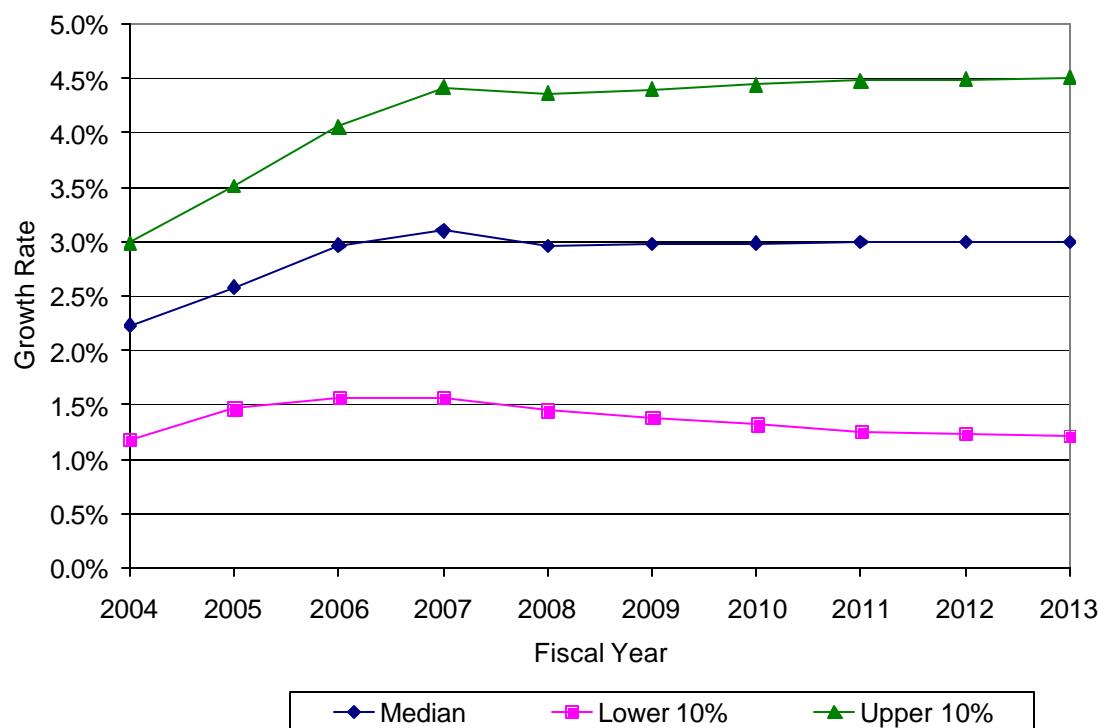
## ARIZONA REAL INCOME PER CAPITA



## ARIZONA POPULATION GROWTH



## ARIZONA WAGE & SALARY EMPLOYMENT



## PANELIST MEAN DATA VALUES

	Income Growth	Population Growth	Wage & Salary Employment
<b>FY 2004</b>			
<b>Upper 10%</b>	2.42	3.07	2.99
<b>Lower 10%</b>	0.52	1.94	1.18
<b>Median</b>	1.41	2.52	2.23
<b>FY 2005</b>			
<b>Upper 10%</b>	2.59	3.12	3.51
<b>Lower 10%</b>	0.55	1.88	1.47
<b>Median</b>	1.52	2.52	2.58
<b>FY 2006</b>			
<b>Upper 10%</b>	2.71	3.17	4.06
<b>Lower 10%</b>	0.62	1.83	1.57
<b>Median</b>	1.53	2.53	2.97
<b>FY 2007</b>			
<b>Upper 10%</b>	2.82	3.22	4.42
<b>Lower 10%</b>	0.56	1.77	1.57
<b>Median</b>	1.61	2.47	3.10
<b>FY 2008</b>			
<b>Upper 10%</b>	2.90	3.28	4.37
<b>Lower 10%</b>	0.46	1.76	1.45
<b>Median</b>	1.58	2.47	2.96
<b>FY 2011</b>			
<b>Upper 10%</b>	2.91	3.28	4.48
<b>Lower 10%</b>	0.28	1.69	1.26
<b>Median</b>	1.52	2.44	3.00
<b>FY 2016</b>			
<b>Upper 10%</b>	2.80	3.17	4.57
<b>Lower 10%</b>	0.13	1.58	1.17
<b>Median</b>	1.36	2.26	3.00
<b>FY 2021</b>			
<b>Upper 10%</b>	2.71	3.09	4.40
<b>Lower 10%</b>	-0.06	1.50	1.07
<b>Median</b>	1.19	2.14	2.72
<b>FY 2026</b>			
<b>Upper 10%</b>	2.68	3.02	4.36
<b>Lower 10%</b>	-0.08	1.43	1.04
<b>Median</b>	1.14	2.04	2.64

All data in the above table are percentage growth rates.

## ARIZONA REAL PER CAPITA INCOME GROWTH

	2004	2005	2006	2007	2008	2011	2016	2021	2026
<b>Panelist 1</b>									
<b>Upper 10%</b>	1.80	2.20	2.50	2.80	2.70	2.70	2.50	2.60	2.70
<b>Lower 10%</b>	0.30	0.35	0.50	0.40	-0.10	-0.50	-1.00	-1.00	-0.50
<b>Median</b>	1.00	1.20	1.40	1.80	1.60	1.40	1.00	1.00	1.20
<b>Panelist 2</b>									
<b>Upper 10%</b>	2.25	2.25	2.00	2.00	2.00	2.00	1.80	1.25	1.00
<b>Lower 10%</b>	1.00	1.00	1.00	0.80	0.80	0.80	0.75	0.70	0.50
<b>Median</b>	1.50	1.50	1.40	1.30	1.30	1.30	1.20	0.90	0.80
<b>Panelist 3</b>									
<b>Upper 10%</b>	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
<b>Lower 10%</b>	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50	-0.50
<b>Median</b>	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
<b>Panelist 4</b>									
<b>Upper 10%</b>	2.00	2.10	2.20	2.30	2.20	2.10	2.00	1.80	1.70
<b>Lower 10%</b>	0.80	0.90	1.00	1.10	1.20	1.10	0.90	0.70	0.50
<b>Median</b>	1.20	1.30	1.40	1.50	1.60	1.50	1.40	1.30	1.00
<b>Panelist 5</b>									
<b>Upper 10%</b>	2.10	2.20	2.30	2.50	2.50	2.50	2.50	2.60	2.80
<b>Lower 10%</b>	0.80	0.30	0.20	-0.10	-0.40	-0.50	-0.70	-0.80	-1.00
<b>Median</b>	1.70	1.70	1.60	1.40	1.40	1.40	1.30	1.10	1.00
<b>Panelist 6</b>									
<b>Upper 10%</b>	2.50	2.70	3.00	3.00	3.50	4.00	4.00	4.00	4.00
<b>Lower 10%</b>	1.00	1.00	1.00	1.00	1.20	1.20	1.20	1.20	1.20
<b>Median</b>	1.50	1.50	1.60	1.80	2.00	2.20	2.50	2.50	2.50
<b>Panelist 7</b>									
<b>Upper 10%</b>	3.20	3.70	4.00	4.00	4.00	4.00	4.00	4.00	4.00
<b>Lower 10%</b>	0.00	0.70	1.50	1.50	1.50	1.50	1.50	1.50	1.50
<b>Median</b>	1.70	2.20	2.00	2.00	2.00	2.00	1.30	1.10	1.10
<b>Panelist 8</b>									
<b>Upper 10%</b>	1.50	1.80	2.20	2.80	3.30	3.00	2.50	2.20	2.00
<b>Lower 10%</b>	0.50	0.40	0.30	0.40	0.40	0.20	0.00	-0.50	-0.50
<b>Median</b>	1.00	1.40	1.50	2.00	1.80	1.60	1.50	1.30	1.20
<b>Panelist 9</b>									
<b>Upper 10%</b>	2.40	2.40	2.20	2.00	1.90	1.90	1.90	1.90	1.90
<b>Lower 10%</b>	0.80	0.80	0.60	0.40	0.00	-0.80	-1.00	-1.80	-1.90
<b>Median</b>	1.60	1.40	1.40	1.20	1.00	0.80	0.50	0.00	0.00

# ARIZONA POPULATION GROWTH

	2004	2005	2006	2007	2008	2011	2016	2021	2026
<b>Panelist 1</b>									
<b>Upper 10%</b>	3.60	3.70	3.90	3.80	3.80	3.70	3.50	3.50	3.30
<b>Lower 10%</b>	2.20	2.10	2.00	1.80	1.60	1.20	1.00	1.00	1.00
<b>Median</b>	2.70	2.60	2.50	2.50	2.40	2.40	2.20	2.00	2.00
<b>Panelist 2</b>									
<b>Upper 10%</b>	3.00	3.00	2.80	2.80	2.80	2.80	2.70	2.50	2.25
<b>Lower 10%</b>	2.00	2.00	1.90	1.80	1.80	1.70	1.50	1.50	1.25
<b>Median</b>	2.40	2.40	2.40	2.30	2.30	2.20	2.00	1.90	1.50
<b>Panelist 3</b>									
<b>Upper 10%</b>	3.00	3.10	3.20	3.60	4.00	4.00	4.00	4.00	4.00
<b>Lower 10%</b>	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
<b>Median</b>	2.70	2.80	2.80	2.70	2.70	2.70	2.70	2.70	2.70
<b>Panelist 4</b>									
<b>Upper 10%</b>	3.00	3.00	2.95	2.95	2.90	2.90	2.60	2.40	2.10
<b>Lower 10%</b>	2.00	2.00	1.95	1.95	1.90	1.90	1.60	1.40	1.10
<b>Median</b>	2.50	2.50	2.45	2.45	2.40	2.40	2.10	1.90	1.60
<b>Panelist 5</b>									
<b>Upper 10%</b>	2.90	3.10	3.20	3.20	3.20	3.20	3.20	3.30	3.50
<b>Lower 10%</b>	1.90	1.80	1.70	1.60	1.60	1.60	1.40	1.30	1.20
<b>Median</b>	2.50	2.50	2.50	2.40	2.40	2.30	2.20	2.00	2.00
<b>Panelist 6</b>									
<b>Upper 10%</b>	3.00	3.00	3.00	3.20	3.20	3.20	3.20	3.00	3.00
<b>Lower 10%</b>	2.20	2.10	2.00	2.00	2.00	2.00	2.00	2.00	2.00
<b>Median</b>	2.50	2.50	2.50	2.50	2.50	2.40	2.30	2.20	2.00
<b>Panelist 7</b>									
<b>Upper 10%</b>	3.70	3.70	3.90	3.70	3.70	3.50	3.50	3.50	3.50
<b>Lower 10%</b>	2.40	2.40	2.70	2.40	2.40	2.30	2.30	2.30	2.30
<b>Median</b>	2.90	2.90	3.10	2.90	2.90	2.80	2.80	2.80	2.80
<b>Panelist 8</b>									
<b>Upper 10%</b>	2.40	2.50	2.70	2.90	3.10	3.40	3.00	2.80	2.70
<b>Lower 10%</b>	1.50	1.20	1.00	1.30	1.40	1.50	1.40	1.20	1.20
<b>Median</b>	2.20	2.20	2.30	2.40	2.50	2.80	2.00	2.00	2.00
<b>Panelist 9</b>									
<b>Upper 10%</b>	3.00	3.00	2.90	2.80	2.80	2.80	2.80	2.80	2.80
<b>Lower 10%</b>	1.50	1.50	1.40	1.30	1.30	1.20	1.20	1.00	1.00
<b>Median</b>	2.30	2.30	2.20	2.10	2.10	2.00	2.00	1.80	1.80

## ARIZONA WAGE & SALARY EMPLOYMENT GROWTH

	2004	2005	2006	2007	2008	2011	2016	2021	2026
<b>Panelist 1</b>									
Upper 10%	2.50	3.50	6.20	7.60	6.00	6.50	8.40	7.70	7.50
Lower 10%	0.70	1.00	2.00	2.50	1.00	0.80	2.00	1.40	1.40
Median	1.80	2.30	4.80	5.50	4.20	4.00	5.20	4.50	4.50
<b>Panelist 2</b>									
Upper 10%	2.50	3.00	3.50	3.50	3.50	3.50	3.50	3.50	3.50
Lower 10%	0.75	1.00	1.25	1.25	1.25	1.00	1.00	1.00	1.00
Median	2.00	2.25	3.00	3.00	2.75	2.50	2.50	2.50	2.50
<b>Panelist 3</b>									
Upper 10%	4.00	4.50	6.00	6.50	6.50	6.50	6.50	6.50	6.50
Lower 10%	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Median	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
<b>Panelist 4</b>									
Upper 10%	2.20	2.40	2.70	3.00	3.50	3.50	3.40	3.00	3.00
Lower 10%	1.00	1.20	1.50	2.00	2.50	2.50	2.30	2.10	2.10
Median	1.50	1.70	2.00	2.50	3.00	3.00	2.80	2.60	2.60
<b>Panelist 5</b>									
Upper 10%	3.40	3.50	3.60	3.80	3.90	4.10	4.10	4.20	4.40
Lower 10%	2.10	1.90	1.80	1.60	1.50	1.00	0.90	0.80	0.60
Median	2.80	2.90	2.90	2.70	2.70	2.50	2.40	2.30	2.10
<b>Panelist 6</b>									
Upper 10%	3.00	3.00	3.00	3.20	3.20	3.50	3.50	4.00	4.00
Lower 10%	2.00	2.00	2.00	1.80	1.80	1.80	1.50	1.50	1.50
Median	2.50	2.50	2.70	3.00	3.00	2.80	2.80	2.50	2.50
<b>Panelist 7</b>									
Upper 10%	4.00	5.50	5.00	4.70	4.70	4.70	3.20	3.20	3.20
Lower 10%	1.00	2.40	2.00	1.70	1.70	1.70	0.80	0.80	0.80
Median	2.50	3.90	3.50	3.20	2.90	3.60	2.60	2.10	2.10
<b>Panelist 8</b>									
Upper 10%	1.50	2.00	2.50	3.00	3.50	3.50	4.00	3.00	2.50
Lower 10%	0.80	1.00	1.10	1.30	1.50	1.00	0.50	0.50	0.50
Median	1.20	1.50	1.80	2.00	2.20	3.00	3.20	2.50	2.00
<b>Panelist 9</b>									
Upper 10%	3.80	4.20	4.00	4.50	4.50	4.50	4.50	4.50	4.60
Lower 10%	1.80	2.20	2.00	1.50	1.30	1.00	1.00	1.00	1.00
Median	2.80	3.20	3.00	3.00	2.90	2.60	2.50	2.50	2.50

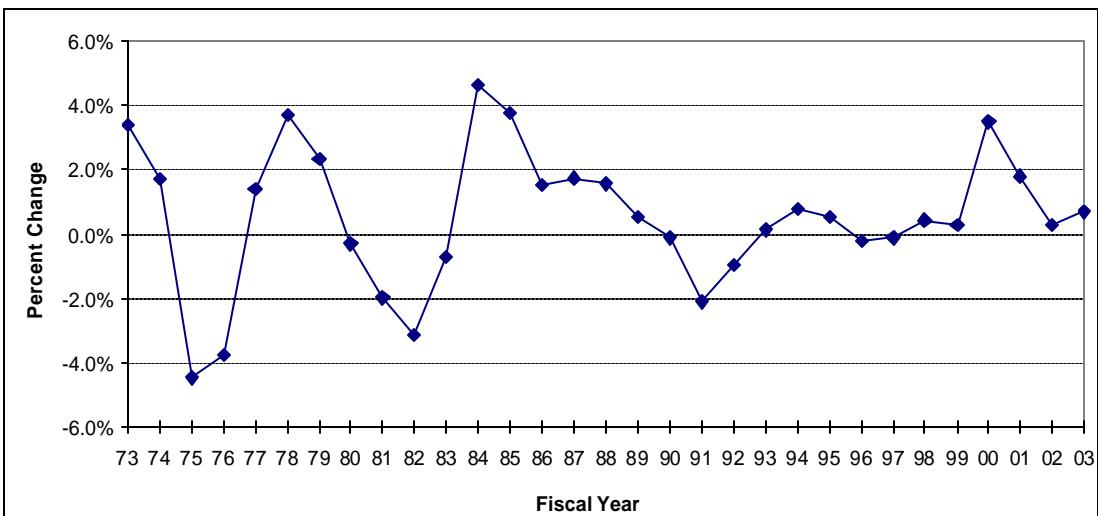
**HISTORICAL DATA**  
**ARIZONA REAL PER CAPITA INCOME GROWTH**  
**Using Phoenix CPI to Measure Inflation**  
**(Annual Percent Change)**

**HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)**

1960	1970	1980	-0.3%	1990	-0.1%	2000	3.5%	
1961	1971	1981	-2.0%	1991	-2.1%	2001	1.8%	
1962	1972	1982	-3.1%	1992	-0.9%	2002	0.3%	
1963	1973	3.4%	1983	-0.7%	1993	0.1%	2003*	0.7%
1964	1974	1.7%	1984	4.6%	1994	0.8%	2004	
1965	1975	-4.5%	1985	3.8%	1995	0.5%	2005	
1966	1976	-3.7%	1986	1.5%	1996	-0.2%	2006	
1967	1977	1.4%	1987	1.7%	1997	-0.1%	2007	
1968	1978	3.7%	1988	1.6%	1998	0.4%	2008	
1969	1979	2.3%	1989	0.5%	1999	0.3%	2009	

\* Estimate

**HISTORICAL DATA - GRAPHED**



**HISTORICAL DATA - ANALYSIS**

Period	Historical Min.	Max.	Mean	Std. Dev.	80% Range Lower	Upper
5 Years	0.3%	3.5%	1.3%	1.4%	0.3%	2.8%
10 Years	-0.2%	3.5%	0.8%	1.1%	-0.1%	2.0%
Full Period	-4.5%	4.6%	0.5%	2.2%	-2.2%	3.5%

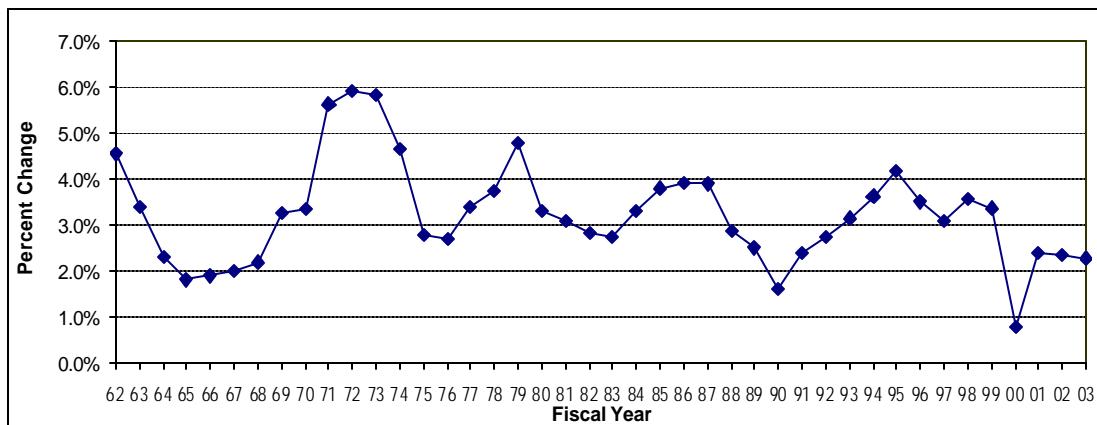
**Historical Data  
ARIZONA POPULATION GROWTH  
(Annual Percent Change)**

**HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)**

1960	1970	3.3%	1980	3.3%	1990	1.6%	2000	0.8%	
1961	1971	5.6%	1981	3.1%	1991	2.4%	2001	2.4%	
1962	4.5%	1972	5.9%	1982	2.8%	1992	2.7%	2002	2.3%
1963	3.4%	1973	5.8%	1983	2.7%	1993	3.1%	2003	2.3%
1964	2.3%	1974	4.7%	1984	3.3%	1994	3.6%	2004	
1965	1.8%	1975	2.8%	1985	3.8%	1995	4.2%	2005	
1966	1.9%	1976	2.7%	1986	3.9%	1996	3.5%	2006	
1967	2.0%	1977	3.4%	1987	3.9%	1997	3.1%	2007	
1968	2.2%	1978	3.7%	1988	2.9%	1998	3.6%	2008	
1969	3.3%	1979	4.8%	1989	2.5%	1999	3.4%	2009	

DES smoothed out the 1991 to 1995 figures. 1996-1999 data from October 2000 approved DES estimates and 2000-2002 from February 1997 approved DES projections.

**HISTORICAL DATA - GRAPHED**



**HISTORICAL DATA - ANALYSIS**

Period	Historical			Std. Dev.	80% Range	
	Min.	Max.	Mean		Lower	Upper
5 Years	0.8%	3.4%	2.2%	0.9%	1.4%	3.0%
10 Years	0.8%	4.2%	2.9%	1.0%	2.1%	3.7%
Full Period	0.8%	5.9%	3.2%	1.1%	2.0%	4.6%

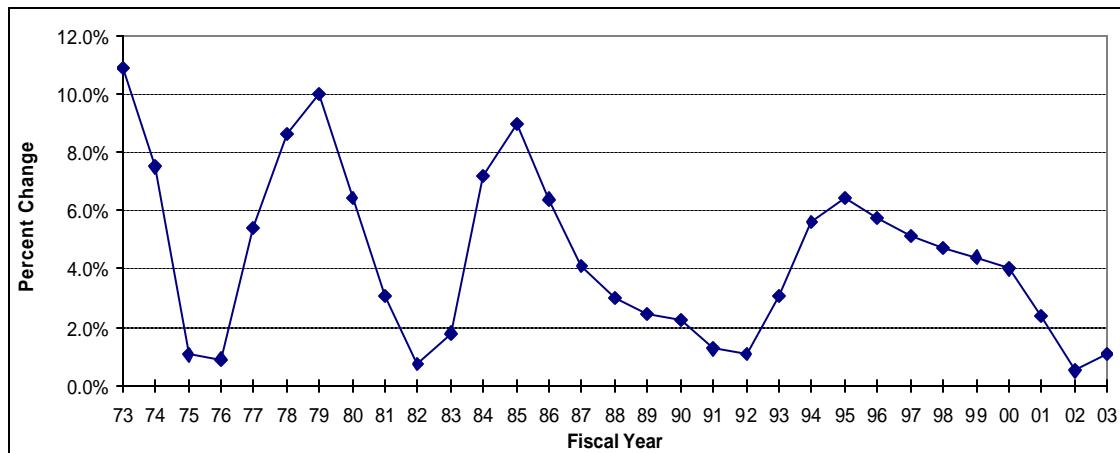
**HISTORICAL DATA**  
**ARIZONA WAGE & SALARY EMPLOYMENT GROWTH**  
**(Annual Percent Change)**

**HISTORICAL DATA BY FISCAL YEAR (July 1 through June 30)**

1960	1970	1980	6.5%	1990	2.3%	2000	4.0%
1961	1971	1981	3.1%	1991	1.3%	2001	2.4%
1962	1972	1982	0.8%	1992	1.1%	2002	0.5%
1963	1973	10.9%	1.8%	1993	3.1%	2003*	1.1%
1964	1974	7.5%	7.2%	1994	5.6%	2004	
1965	1975	1.1%	9.0%	1995	6.5%	2005	
1966	1976	0.9%	6.4%	1996	5.8%	2006	
1967	1977	5.4%	4.1%	1997	5.2%	2007	
1968	1978	8.7%	3.0%	1998	4.7%	2008	
1969	1979	10.0%	2.5%	1999	4.4%	2009	

\* Estimate

**HISTORICAL DATA - GRAPHED**



**HISTORICAL DATA - ANALYSIS**

Period	Historical		Mean	Std. Dev.	80% Range	
	Min.	Max.			Lower	Upper
5 Years	0.5%	4.4%	2.5%	1.7%	0.7%	4.2%
10 Years	0.5%	6.5%	4.0%	2.0%	1.0%	5.8%
Full Period	0.5%	10.9%	4.4%	2.9%	1.1%	8.7%